



# Arizona State Retirement System

## Third Quarter 2009 Market Environment, Total Fund Review and Investment Outlook December 18, 2009

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*"Advancing Your Investments"*



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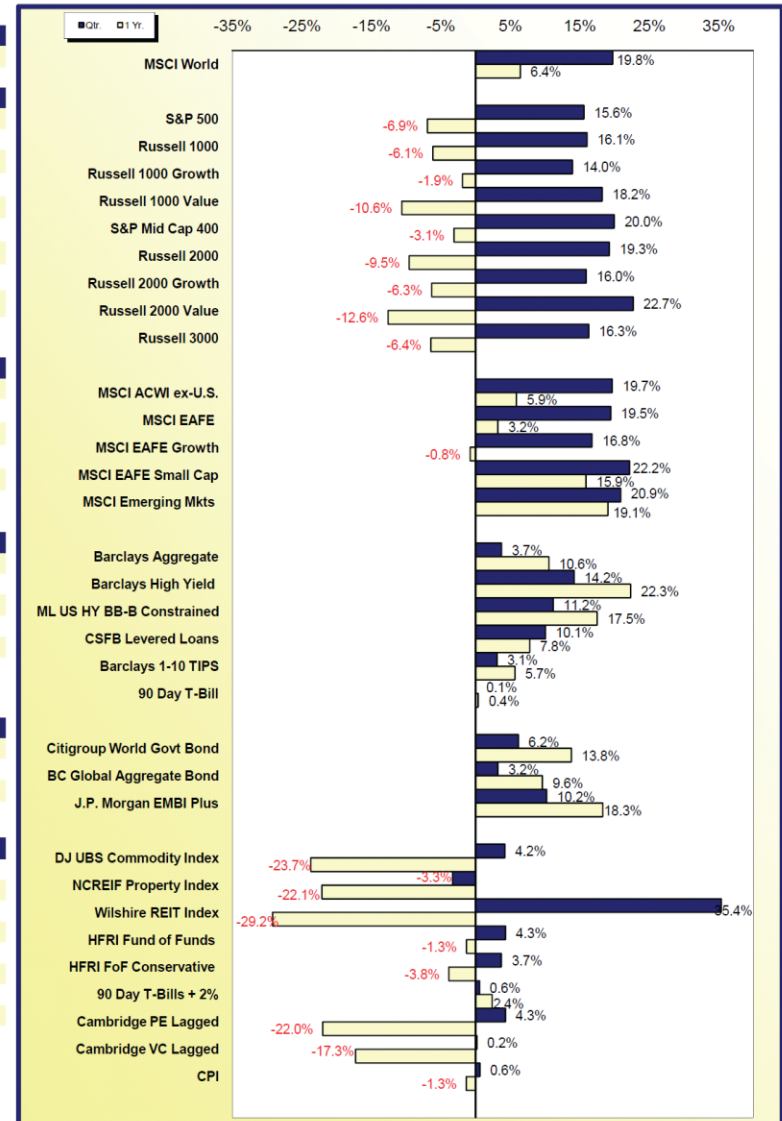


# Market Environment



# Market Environment – Overview (As of 9/30/2009)

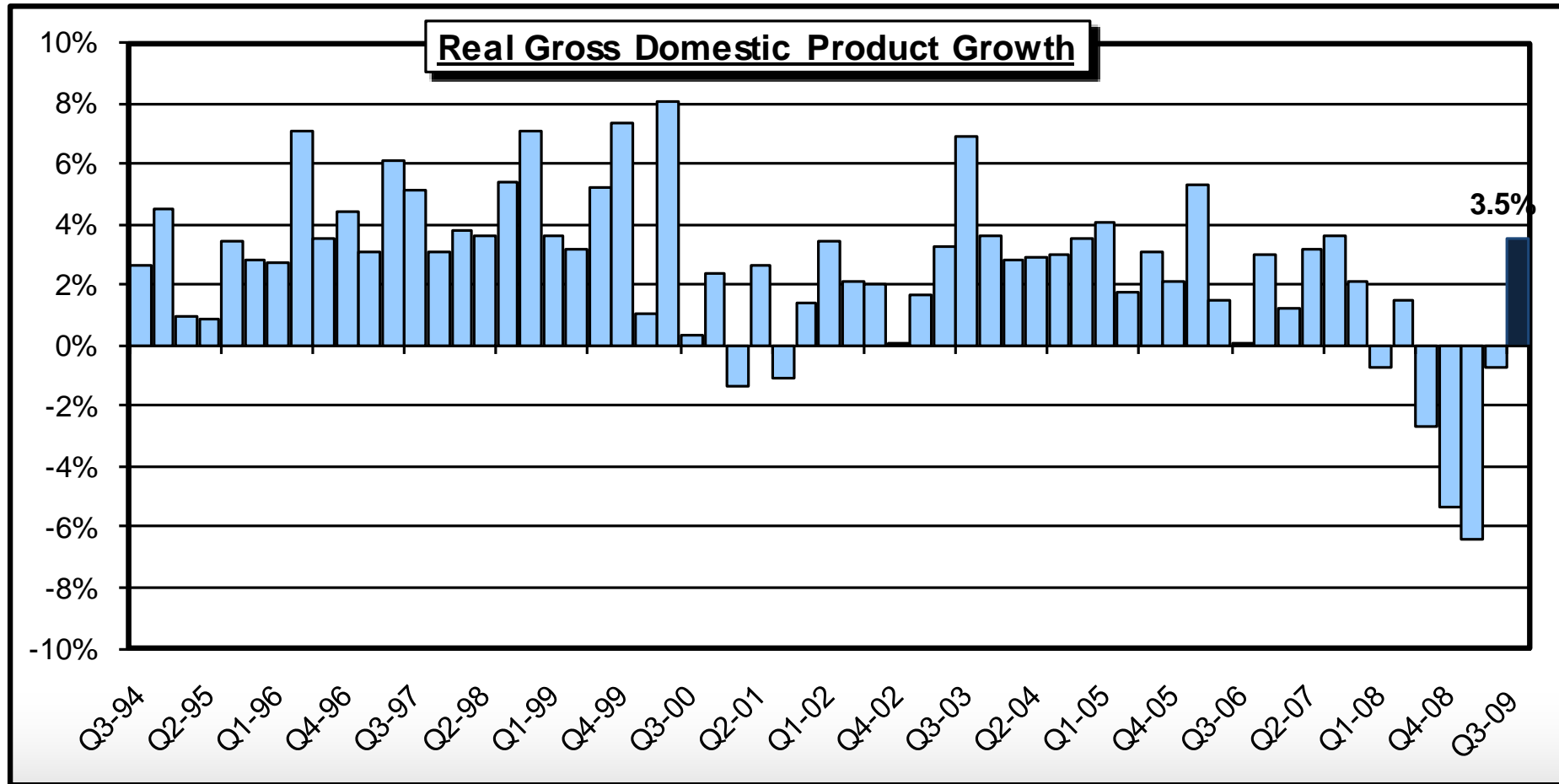
		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>World Equity Benchmarks</b>							
MSCI World	World	19.8%	37.0%	6.4%	-0.8%	8.6%	4.5%
<b>Domestic Equity Benchmarks</b>							
S&P 500	Large Core	15.6%	19.2%	-6.9%	-5.4%	1.0%	-0.1%
Russell 1000	Large Core	16.1%	21.1%	-6.1%	-5.1%	1.5%	0.4%
Russell 1000 Growth	Large Growth	14.0%	27.1%	-1.9%	-2.5%	1.9%	-2.6%
Russell 1000 Value	Large Value	18.2%	14.8%	-10.6%	-7.9%	0.9%	2.6%
S&P Mid Cap 400	Mid Core	20.0%	30.2%	-3.1%	-1.4%	4.5%	7.5%
Russell 2000	Small Core	19.3%	22.4%	-9.5%	-4.6%	2.4%	4.9%
Russell 2000 Growth	Small Growth	16.0%	29.1%	-6.3%	-2.6%	2.9%	1.1%
Russell 2000 Value	Small Value	22.7%	16.4%	-12.6%	-6.6%	1.8%	8.0%
Russell 3000	US Equity	16.3%	21.2%	-6.4%	-5.1%	1.6%	0.7%
<b>International Equity Benchmarks</b>							
MSCI ACWI ex-U.S.	International	19.7%	36.4%	5.9%	-1.2%	8.1%	4.0%
MSCI EAFE	Int'l Developed	19.5%	29.0%	3.2%	-3.6%	6.1%	2.5%
MSCI EAFE Growth	Int'l Developed	16.8%	24.2%	-0.8%	-3.2%	5.7%	0.6%
MSCI EAFE Small Cap	Int'l Developed	22.2%	48.8%	15.9%	-3.4%	7.5%	7.0%
MSCI Emerging Mkts	Int'l Emerging	20.9%	64.4%	19.1%	7.9%	17.3%	11.5%
<b>Domestic Fixed Income Benchmarks</b>							
Barclays Aggregate	Core Bonds	3.7%	5.7%	10.6%	6.4%	5.1%	6.3%
Barclays High Yield	High Yield	14.2%	49.0%	22.3%	5.3%	6.1%	6.3%
ML US HY BB-B Constrained	High Yield	11.2%	39.5%	17.5%	4.6%	5.3%	5.8%
CSFB Levered Loans	Bank Loans	10.1%	39.9%	7.8%	1.2%	3.2%	n/a
Barclays 1-10 TIPS	Inflation	3.1%	9.5%	5.7%	5.6%	4.8%	7.5%
90 Day T-Bill	Cash	0.1%	0.2%	0.4%	2.8%	3.1%	3.1%
<b>Global Fixed Income Benchmarks</b>							
Citigroup World Govt Bond	Global Bonds	6.2%	4.6%	13.8%	9.4%	6.6%	6.7%
BC Global Aggregate Bond	Global Bonds	3.2%	4.8%	9.6%	5.5%	5.1%	5.8%
J.P. Morgan EMBI Plus	Em. Mkt. Bonds	10.2%	24.3%	18.3%	7.5%	9.2%	12.1%
<b>Alternative Benchmarks</b>							
DJ UBS Commodity Index	Commodities	4.2%	9.1%	-23.7%	-5.0%	-0.8%	6.3%
NCREIF Property Index	Real Estate	-3.3%	-15.1%	-22.1%	-1.3%	6.2%	7.8%
Wilshire REIT Index	REITs	35.4%	17.8%	-29.2%	-13.7%	1.2%	9.7%
HFRI Fund of Funds	Hedge Funds	4.3%	9.8%	-1.3%	0.1%	3.4%	5.2%
HFRI FoF Conservative	Hedge Funds	3.7%	8.5%	-3.8%	-0.9%	2.2%	4.3%
90 Day T-Bills + 2%	Cash + 2%	0.6%	1.6%	2.4%	4.9%	5.2%	5.2%
Cambridge PE Lagged	Private Equity	4.3%	-15.2%	-22.0%	3.0%	12.2%	8.9%
Cambridge VC Lagged	Venture Capital	0.2%	-14.9%	-17.3%	2.1%	6.5%	4.9%
CPI	Inflation	0.6%	2.0%	-1.3%	2.1%	2.6%	2.5%



Note: Cambridge Private Equity and Venture Capital Indices are lagged by one quarter.



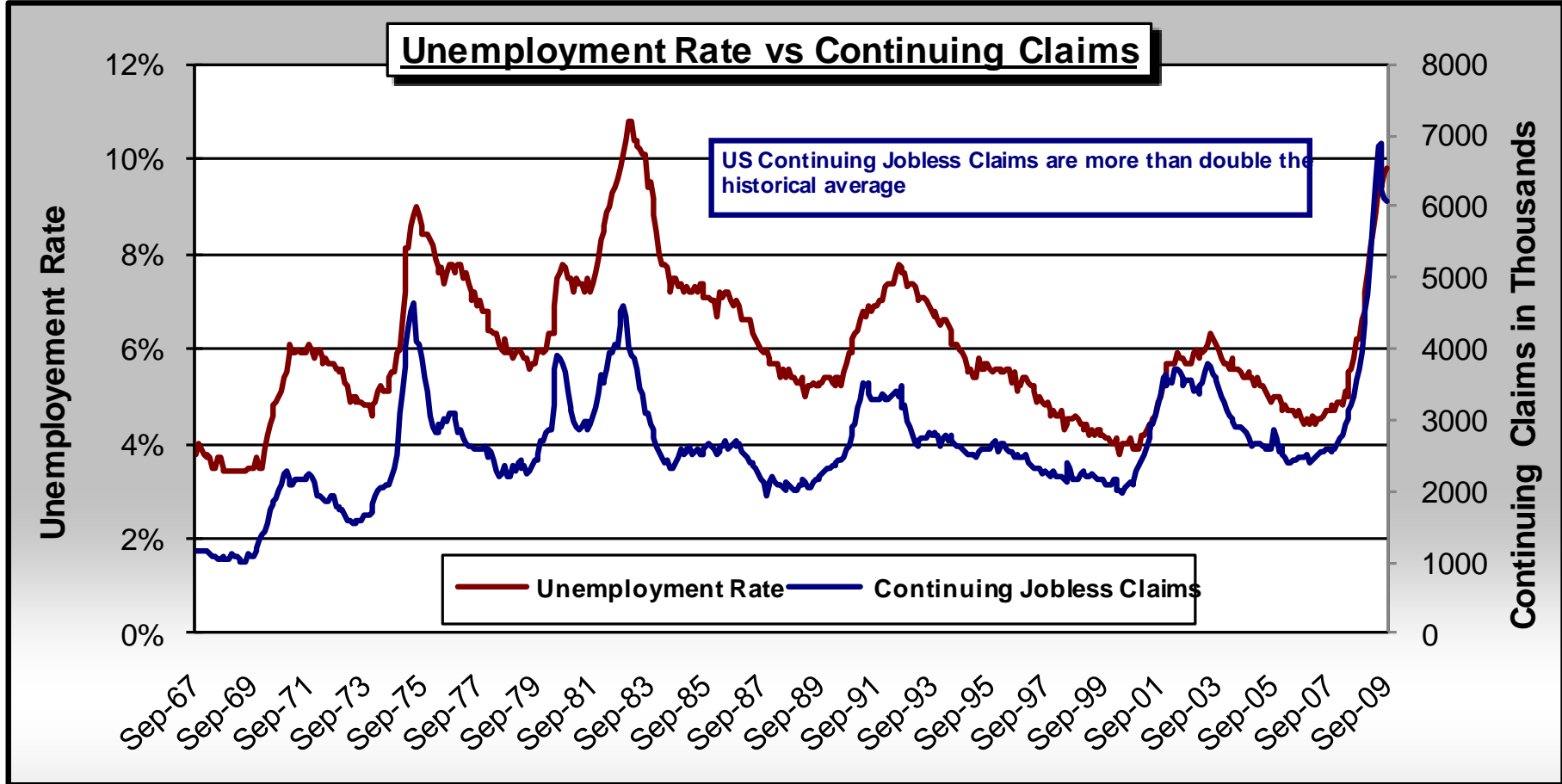
# Market Environment – U.S. Economy (As of 9/30/2009)



**GDP grew 3.5% in Q3...**



# Market Environment – U.S. Economy (As of 9/30/2009)

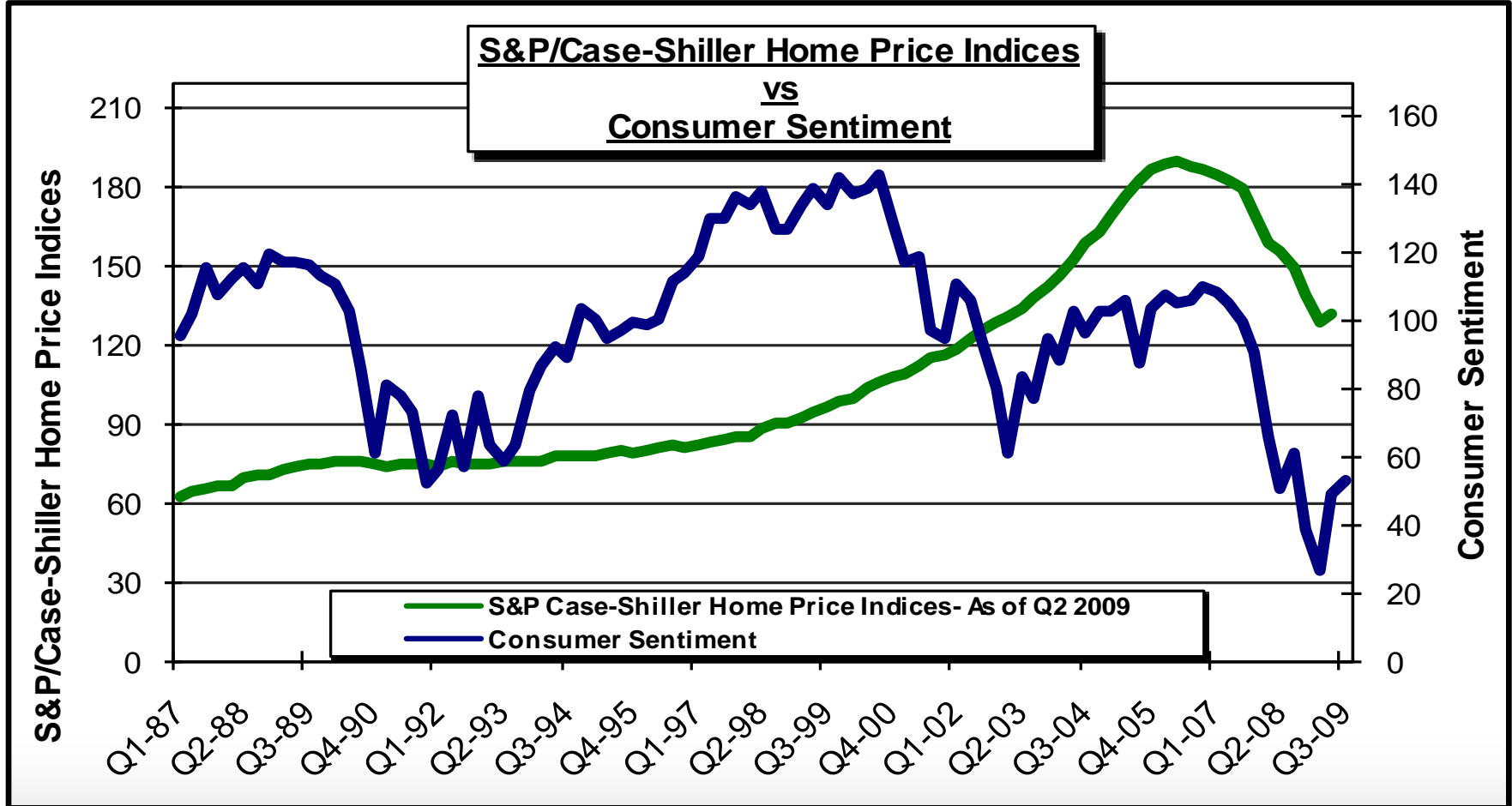


Unemployment rate hit 9.8% in Q3, however US Continuing Jobless Claims decreased from last quarter...

Source: Department of Labor and St. Louis Federal Reserve



# Market Environment – U.S. Economy (As of 9/30/2009)

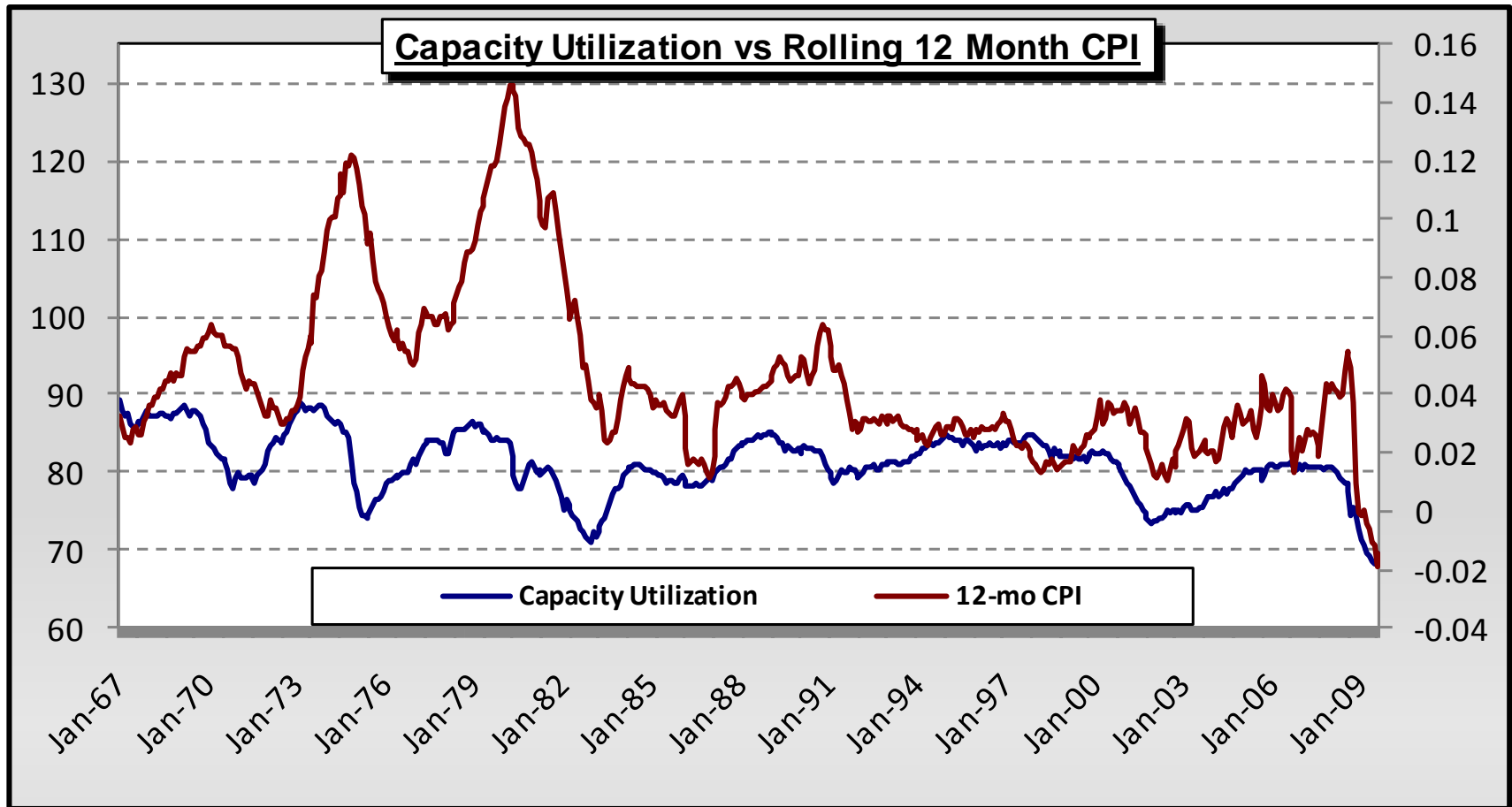


**Housing prices have fallen 30% from their peak in Q2 of 2006; Consumer sentiment improved in Q3 of 2009...**

Source: Standard & Poor's and Bloomberg



# Market Environment – U.S. Economy (As of 9/30/2009)

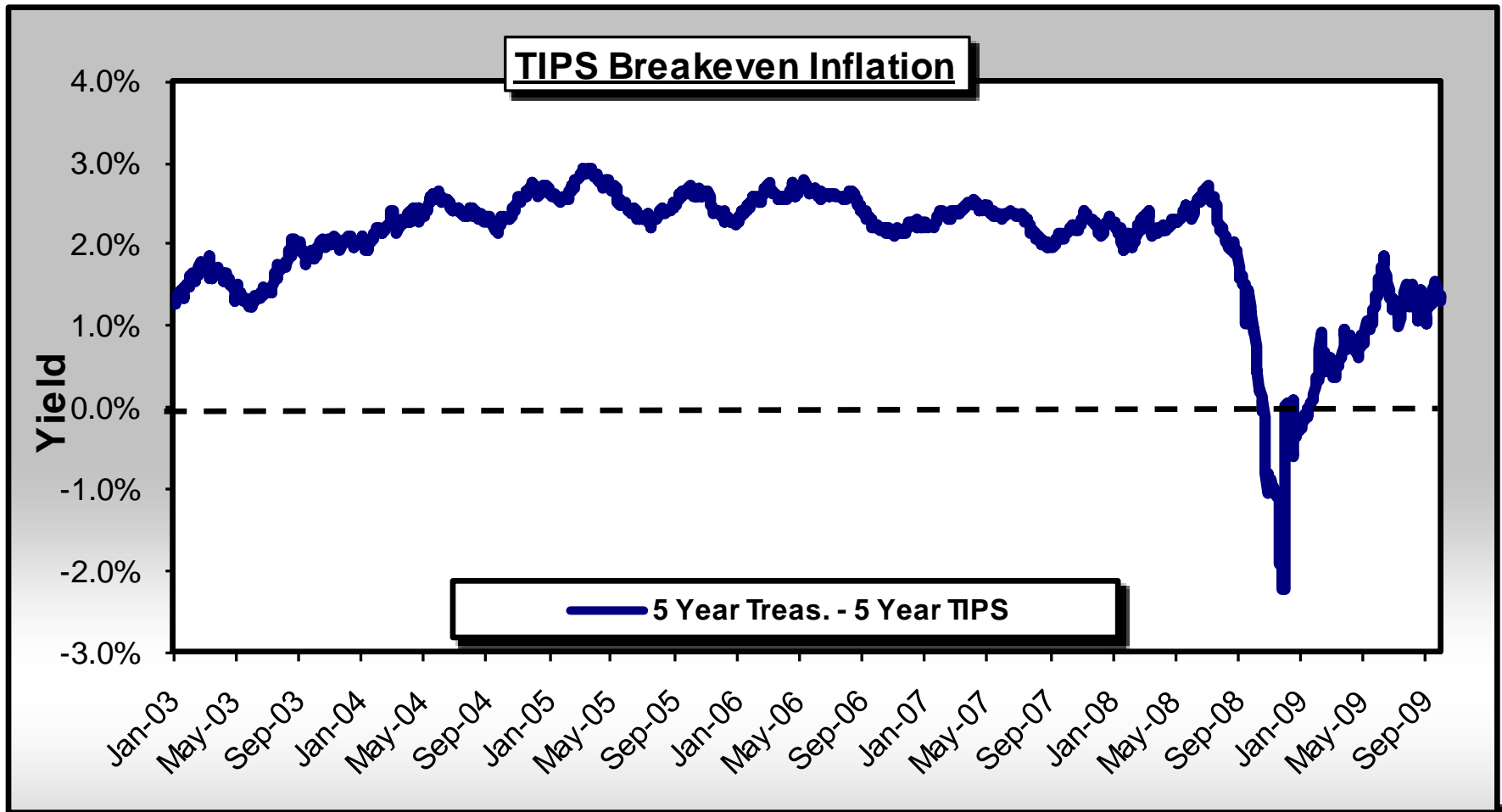


**In the near term, inflation is less of a concern with a great deal of economic slack to work through before prices and wages come under pressure...**

Source: Bloomberg



# Market Environment – U.S. Economy (As of 9/30/2009)

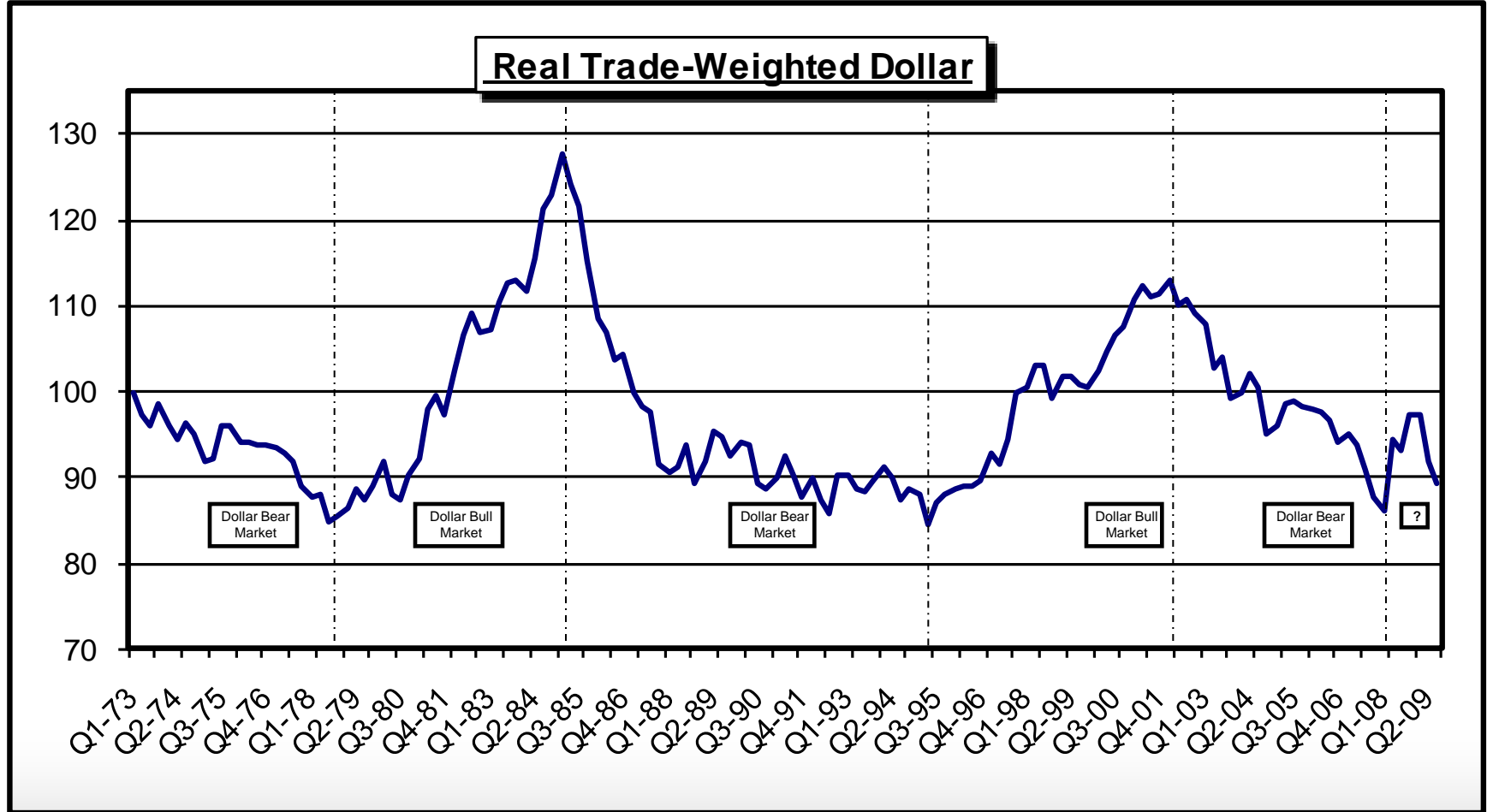


**TIPS Breakeven Inflation is 1.30% after dipping below -2% in November...**

Source: United States Federal Reserve



# Market Environment – U.S. Economy (As of 9/30/2009)

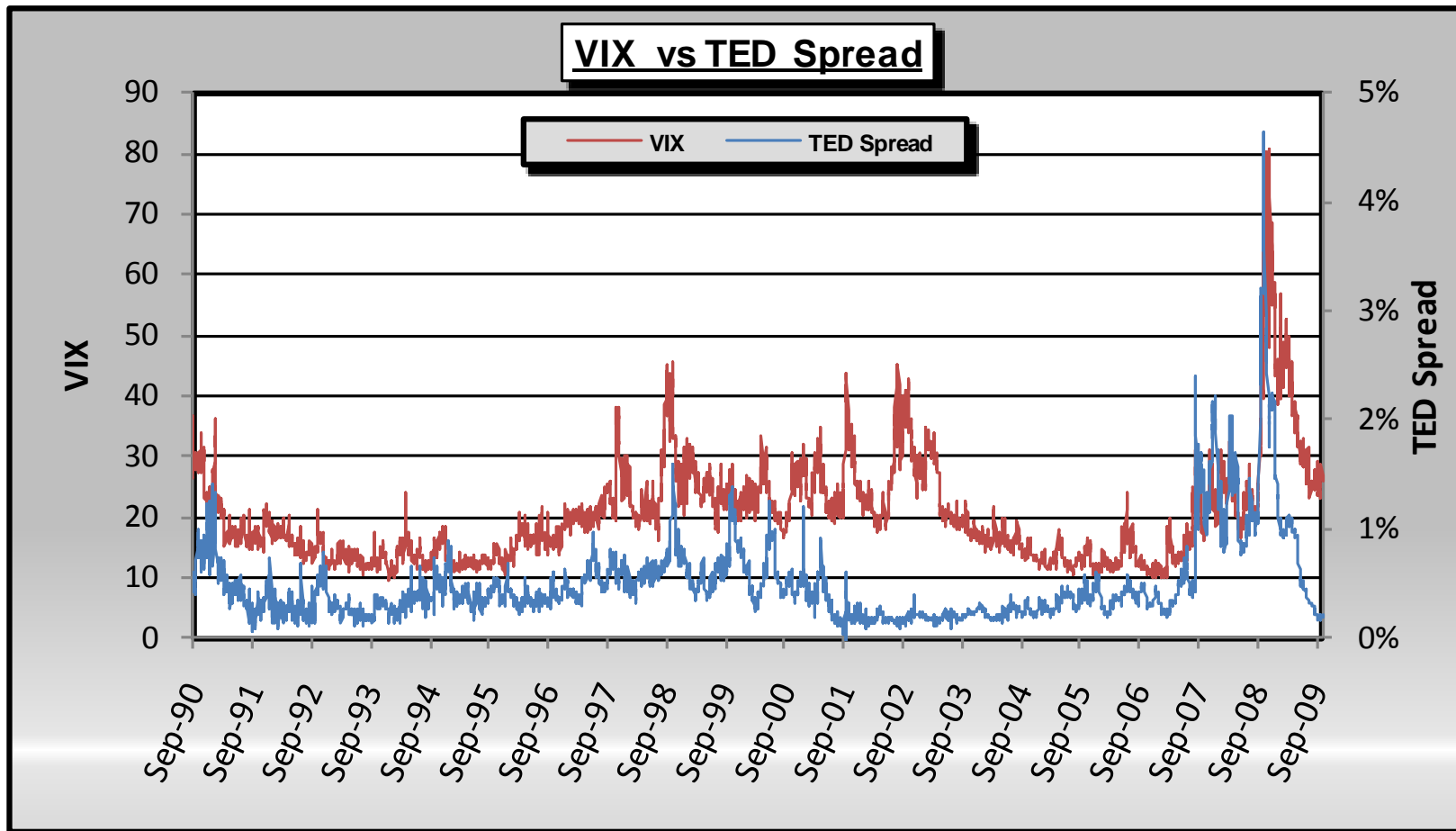


**The Dollar depreciated in Q3...**

Source: Bloomberg and St. Louis Federal Reserve



# Market Environment – U.S. Economy (As of 9/30/2009)

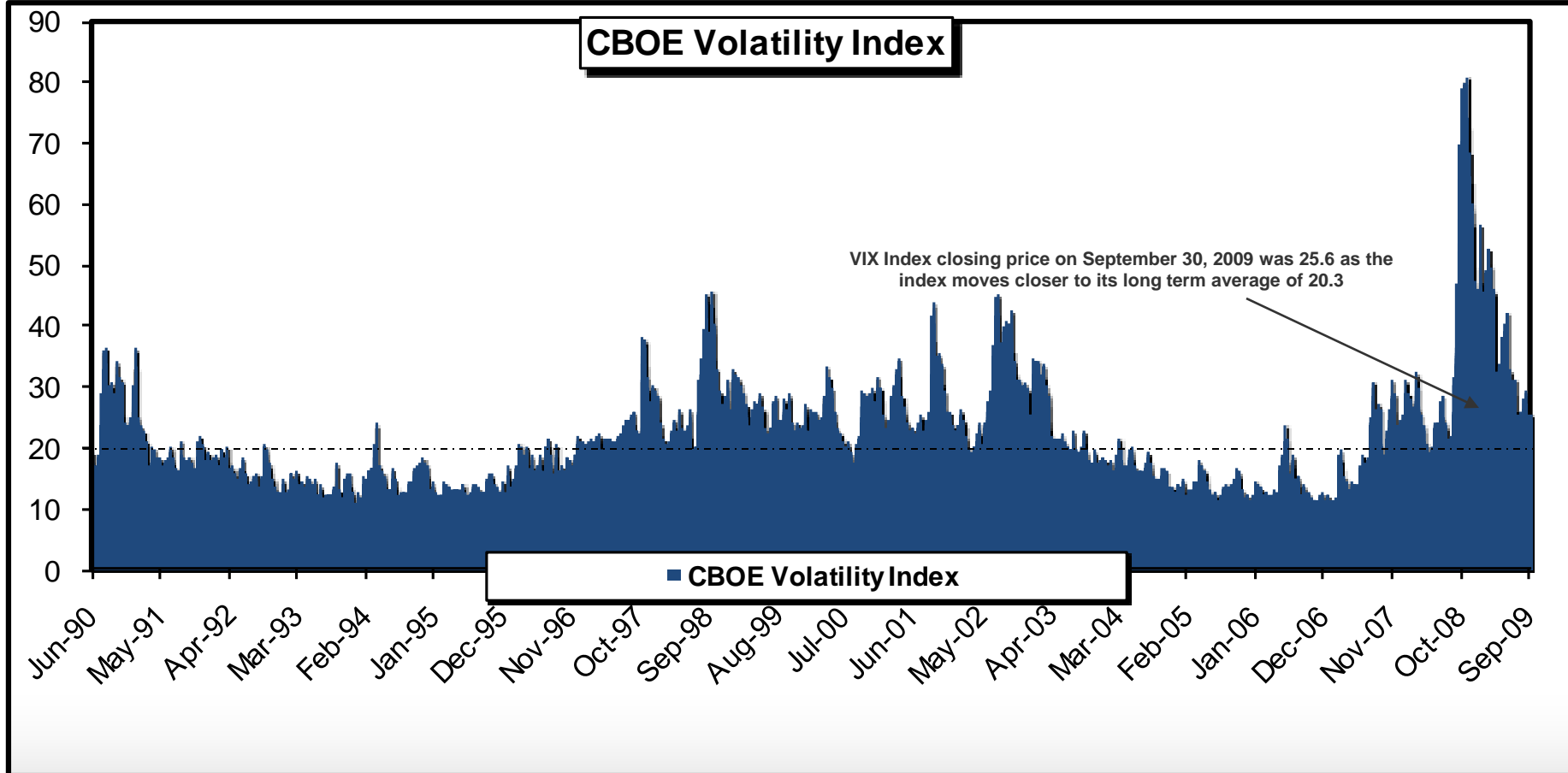


**Key fear indicators such as the VIX and TED Spread (90 Day Libor - 90 Day T-Bill) have stabilized after hitting record highs in Q4 2008...**

Source: Bloomberg



# Market Environment – U.S. Economy (As of 9/30/2009)



**The Volatility Index remained constant in Q3 of 2009 ...**

Source: Bloomberg





# Domestic & International Equities (As of 9/30/2009)

- All capitalizations and styles were positive during the quarter
  - S&P 500 submitted its best quarterly return since 1998
  - Russell 2000 performance during the quarter was 10<sup>th</sup> best all time for the index
  - Low quality stocks continue to outperform
- Both Large Cap and Small Cap P/Es are below historical averages
- Earnings yield continues to exceed bond yield
- EPS growth contracted in 2008 and is expected to decline again in 2009
- S&P momentum shows a bullish signal
- S&P continued to rally in 3Q09, with all 10 sectors producing positive results
  - Consumer Discretionary, Financials, Industrials, and Materials sectors were all up more than 20%
- Large Cap trails Small Cap by 1.3% year-to-date
- Growth stocks outperformed value stocks by 12% year-to-date
- International Equity outperformed Domestic Equity by 24% year-to-date



# Fixed Income (As of 9/30/2009)

- All major fixed income sectors were positive in the third quarter
- Interest rates declined across the yield curve during the quarter
  - Short term rates still anchored near zero
  - Near zero interest rates have caused investors to seek yield further out on the curve
- High Yield markets are up 49% year-to-date
  - Lower quality, higher beta sub-sectors leading the way
- Spread sectors continue to significantly outperform Treasuries
  - Spreads have compressed in most non-Treasury sectors as investor confidence, liquidity, and yield
- The Federal Open Market Committee continues to reiterate their view that economic conditions warrant exceptionally low rates
  - With fiscal stimulus deployed throughout the market, it's hard to see the Fed hiking rates until some of the aid and stimulus is withdrawn.



# Private Markets (As of 9/30/2009)

## • Where we were

- Credit was available and underwriting standards were favorable to the borrower
  - Purchase Multiples were increasing
  - Capital Structure was laden with debt
  - Companies took on more debt
  - Dividend recaps were debt financed
- The consumer was spending and not saving
  - Earnings were up

## • Current Environment

- Earnings are down
- Underwriting standards have become more stringent
- Debt is not easily available
- Consumers are saving more
- Unemployment is high – possible jobless recovery

## • Manager's Reactions

- Focus on rationalizing operations – cost cutting
- Productivity increases without adding employees
- Rents are down - tenants are competing with landlords for tenants

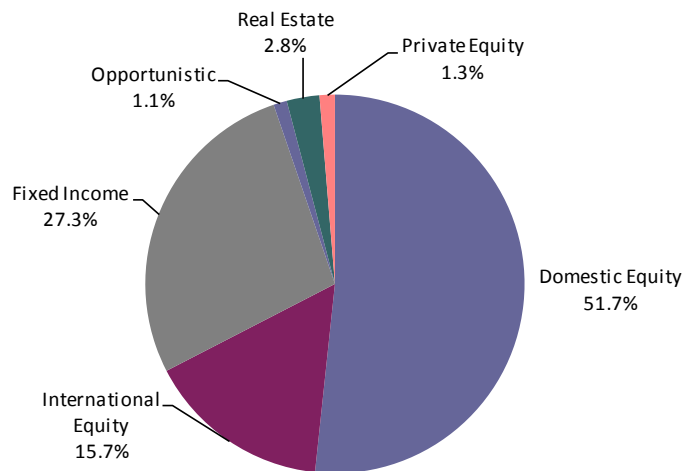


# ASRS Total Fund Review

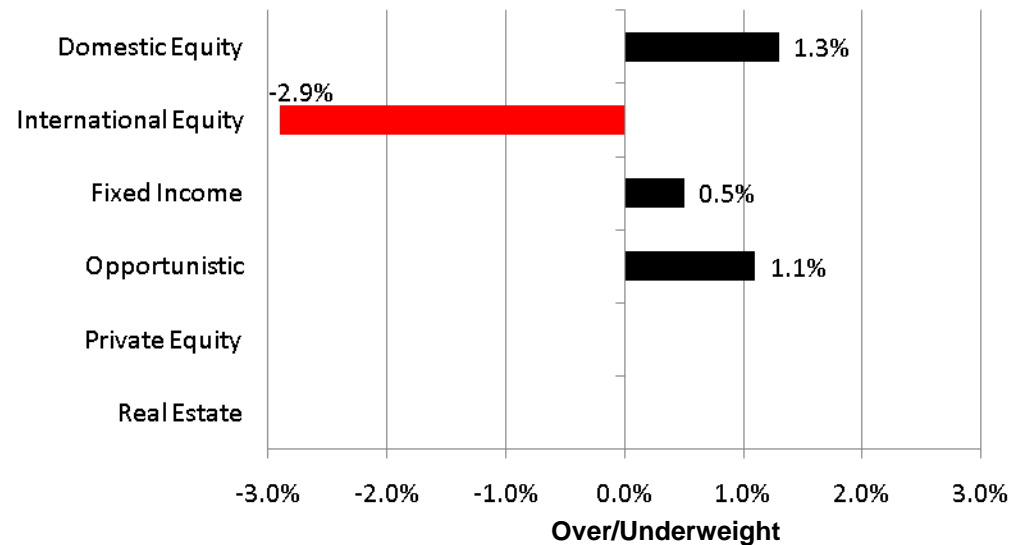


# Total Fund Asset Allocation (As of 9/30/2009)

## Actual Asset Allocation



## Actual Asset Allocation vs. Policy Adjusted for Transition into Real Estate and Private Equity



Note: Real Estate and Private Equity market values are reported on a quarter-lag, and adjusted to include the current quarter's cash flows. Within the Policy Adjusted for Transition chart, Real Estate was prorated to domestic equity, international equity, and fixed income while Private Equity was prorated to domestic equity.



# ASRS Investment Program Investment Goals

Macro

- Goal #1: Achieve a total fund rate of return equal to or greater than the actuarial assumed interest rate.
- Goal #2: Achieve a total fund rate of return equal to or greater than the asset allocation benchmark.
- Goal #3: Achieve a total fund rate of return equal to or greater than the amount projected in the most recent asset allocation study.
- Goal #4: Achieve asset class net rates of return equal to or greater than their respective broad asset class benchmarks.
- Goal #5: Achieve portfolio-level net rates of return equal to or greater than their respective portfolio benchmarks.
- Goal #6: Ensure sufficient monies are available to meet cash flow requirements.

Micro





# Total Fund Performance (As of 9/30/2009)

**Goal #1: Achieve a 10-year rolling annual rate of return equal to or greater than 8%**

	<u>10 Year Annualized Return</u>
Total Fund	3.4%
Constant 8%	<u>8.0%</u>
Excess Return	<b>-4.6%</b>

**Goal Met: No**



# Total Fund Performance (As of 9/30/2009)

**Goal #2: Achieve annual and 3 year rolling annual rates of return equal to or greater than the return of the Asset Allocation Benchmark (SAA Benchmark)**

	Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception (6/30/75)
<b>Total Fund<sup>1</sup></b>	13.4%	1.0%	<b>-1.0%</b>	3.8%	3.4%	9.8%
<b>SAA Benchmark*</b>	12.8%	0.5%	<b>-0.6%</b>	3.9%	2.8%	9.5%
<b>Excess Return</b>	0.6%	0.5%	<b>-0.4%</b>	<b>-0.1%</b>	0.6%	0.3%

**1 Year Goal Met: Yes**

**3 Year Goal Met: No**

<sup>1</sup> All performance presented within this report currently excludes Private Equity returns, which will be reported at a later date. The impact of the inclusion of Private Equity returns is not expected to be material.

\*Benchmark Policy History can be found on the last page of this presentation



# Total Fund Attribution (As of 9/30/2009)

	1 Year	3 Years	5 Years	10 Years
Public Markets	1.2%	0.0%	0.1%	0.6%
Private Markets	-0.7	-0.4	-0.2	0.0
<b>Total Management Effect</b>	<b>0.5</b>	<b>-0.4</b>	<b>-0.1</b>	<b>0.6</b>
<b>Public Markets Detail</b>				
Allocation Effect:				
Strategic Allocation <sup>1</sup>	0.1	0.0	0.1	0.4
Tactical Allocation <sup>2</sup>	-0.4	-0.1	0.0	0.0
a. Total Allocation Effect	-0.3	-0.1	0.1	0.4
Manager Selection Effect:				
Gross Selection	1.3	0.2	0.1	0.3
Investment Management Fees	-0.1	-0.1	-0.1	-0.1
Interaction Effect	0.3	0.0	0.0	0.0
b. Net Selection Effect <sup>3</sup>	1.5	0.1	0.0	0.2
<b>Total Public Markets Management Effect [a+b]</b>	<b>1.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.6</b>
<b>Private Markets Detail *</b>				
Real Estate	-0.7	-0.4	-0.2	0.0
Private Equity	0.0	0.0	0.0	0.0
<b>Total Private Markets Management Effect</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-0.2</b>	<b>0.0</b>
<b>Total Management Effect</b>	<b>0.5</b>	<b>-0.4</b>	<b>-0.1</b>	<b>0.6</b>

Footnotes:

<sup>1</sup> Contribution due to the asset classes that are not in the ASRS strategic asset allocation benchmark

<sup>2</sup> Contribution due to over-/under-weights relative to strategic asset allocation policy weights and opportunistic fund weights

<sup>3</sup> Manager Selection Effect represents contribution from 1) manager selection and 2) any active value/growth style tilt

\* Private Market performance is reported versus the asset class benchmark.

No allocation effect will be reported for private markets until assets invested approach the target allocations



# Total Fund Attribution Summary (As of 9/30/2009)

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## 1 Year Excess Return: 0.5%

- Manager Selection Effect: 1.5%
  - Domestic Equity outperformed due to LSV and DFA (0.60%)
  - GTAA outperformed due to Bridgewater (0.53%)
  - Fixed Income underperformed due to Guggenheim and BGI (0.50%)
  - International Equity underperformed due to Brandes and AXA Rosenberg (-0.33%)
- Allocation Effect: -0.3%
  - International Equity tactical underweight (-0.57%)
  - Large-cap equity tactical underweight (0.17%)
- Real Estate Effect: -0.7%
  - Investment in REITs, Write-downs, and the J-Curve Effect detracted from performance (-0.70%)

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## 3 Years Excess Return: -0.4%

- Manager Selection Effect: 0.1%
  - Fixed Income underperformed due to current managers Blackrock and terminated JP Morgan (-0.17%)
  - TAA outperformed due to Bridgewater (0.21%)
- Allocation Effect: -0.1%
  - International tactical weightings (-0.12%)
- Real Estate Effect: -0.4%

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## 5 Years Excess Return: -0.1%

- Manager Selection Effect: 0.0%
  - Underperformance in Fixed Income was due to both terminated and current managers (-0.16%)
  - TAA outperformed due to Bridgewater (0.17%)
- Allocation Effect: 0.1%
  - Fixed Income tactical weightings (0.05%)
- Real Estate Effect: -0.2%

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## 10 Years Excess Return: 0.6%

- Manager Selection Effect: 0.2%
  - International Equity outperformed due to Brandes, Capital Guardian and BNY (0.17%)
- Allocation Effect: 0.4%
  - Small/Mid-cap strategic allocation (0.44%)



# Total Fund Performance (As of 9/30/2009)

**Goal #3: Achieve a 5 year rolling annual rate of return equal to or greater than the projected return expectation in the ASRS Asset Allocation Study**

	<u>5 Year Annualized Return</u>
Total Fund	3.8%
AA Expected Return	<u>7.9%</u>
Excess Return	-4.1%

**Goal Met: No**



# ASRS Asset Class Performance vs. Benchmarks (As of 9/30/2009)

**Goal #4: Achieve annual and 3 year rolling annual investment asset class net rates of return equal to or greater than their respective broad asset class benchmarks**

	1 Year Return	3 Year Return
ASRS Domestic Equity	-4.9%	-4.2%
Domestic Benchmark*	-6.8%	-4.7%
Excess Return	1.9%	0.5%
ASRS International Equity	5.2%	-2.5%
MSCI ACWI ex-U.S.	6.4%	-0.8%
Excess Return	-1.2%	-1.7%
ASRS Fixed Income	13.0%	6.8%
BC Aggregate	10.6%	6.4%
Excess Return	2.4%	0.4%
ASRS GTAA	4.4%	0.1%
Custom Benchmark**	0.3%	-1.4%
Excess Return	4.1%	1.5%
ASRS Real Estate	-34.6%	-8.9%
NPI + 1%	-18.6%	2.0%
Excess Return	-16.0%	-10.9%

**Goal Met: Partially**

\* Domestic Equity Benchmark was S&P 500 through 12/31/2006 and 74% S&P 500, 13% S&P 400, 13% S&P 600 thereafter

\*\* GTAA Custom Benchmark is 56% S&P 500; 28% BC Agg; 16% MSCI EAFE



# ASRS Manager Performance vs. Benchmarks (As of 9/30/2009)

**Goal #5: Achieve annual and 3-year rolling annual portfolio level net rates of return equal to or greater than their respective portfolio benchmarks**

	1 Year	3 Years
<b>Outperformers #</b>	<b>28</b>	<b>18</b>
<b>Underperformers #</b>	<b>31</b>	<b>11</b>
<b>Outperformers%</b>	<b>47%</b>	<b>62%</b>

**Goal Met: Yes**



# ASRS Cash Management

**Goal #6: Ensure all pension benefits, health insurance, member refunds, administrative payments, and other requirements are made from available cash balances and without utilizing alternate liquidity options.**

Month	Master Cash Balance pre-run	Net Pension Run	Master Cash Balance post-run
Oct-08	\$89,485,932	-\$139,500,100	\$40,350,453
Nov-08	\$75,503,943	-\$140,663,511	\$23,007,643
Dec-08	\$200,842,128	-\$141,654,779	\$52,292,787
Jan-09	\$183,373,818	-\$140,269,578	\$34,406,356
Feb-09	\$153,266,188	-\$141,848,592	\$13,281,836
Mar-09	\$171,026,399	-\$141,899,846	\$37,519,837
Apr-09	\$166,981,452	-\$141,910,214	\$30,480,184
May-09	\$153,741,143	-\$142,080,609	\$102,266,079
Jun-09	\$152,092,343	-\$142,386,547	\$38,765,983
Jul-09	\$80,736,511	-\$145,381,006	\$41,605,461
Aug-09	\$177,951,392	-\$148,319,471	\$36,023,992
Sep-09	\$181,782,602	-\$148,999,811	\$32,571,030

**All Pension Obligations, Capital Calls and Other  
Requirements Met with Available Cash**

**Goal Met: Yes**



# Total Fund Performance Comparison\* (As of 9/30/2009)

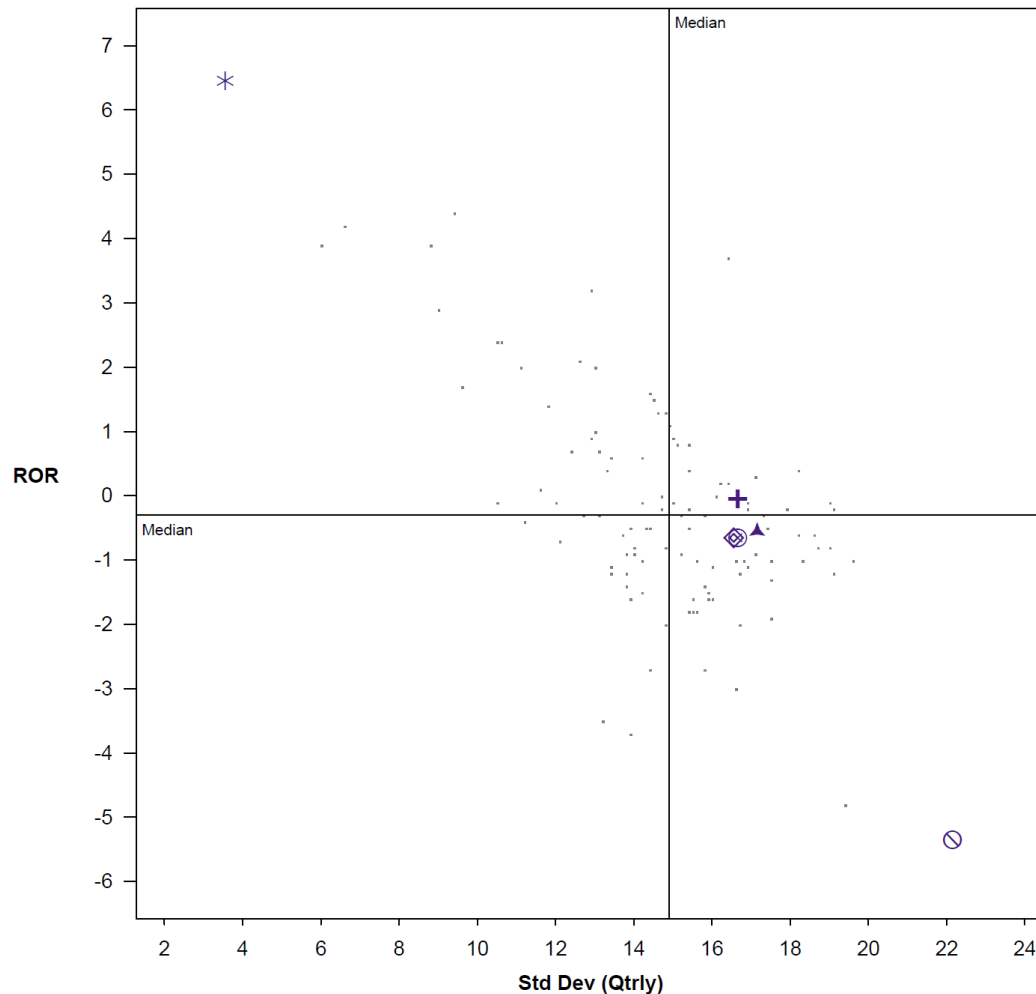
	1 Year	3 Years	5 Years	10 Years
<b><u>Independent Consultant's Cooperative</u></b>				
Master Trust Funds - Total Funds	59	64	59	83
Total Funds - Public	51	61	58	89
Total Funds over \$1 B - Public	29	42	62	84
Total Funds - Corporate	60	63	65	83
<b><u>Callan Associates Inc.</u></b>				
Master Trust Funds - Total Funds	47	61	61	82
Total Funds - Public	47	60	60	85
Total Funds over \$1 B - Public	31	55	75	91
Total Funds - Corporate	64	63	65	85

\*The information contained herein is for comparison purposes only and is not a Total Fund performance benchmark. Peer universe comparisons are subject to several limitations, including: peer groups are not comprehensive, several funds are included in multiple peer groups, peer groups are constructed using gross of fees returns, and survivorship bias in that poorly performing funds may no longer continue to report results.

Note: Universes are constructed using gross of fee returns; therefore, the ASRS rank is based on gross of fee returns.



# 3 Yr. Return/Volatility vs. Public Funds (As of 9/30/2009)



NAME	Return		Standard Deviation		Sharpe Ratio	
⊗ TOTAL FUND	-0.7	61	16.7	79	-0.2	58
⬢ ACTUAL BENCHMARK	-0.7	61	16.6	76	-0.2	59
▲ INTERIM TOTAL FUND BENCHMARK	-0.6	60	17.2	84	-0.2	55
+ TOTAL FUND BENCHMARK	-0.1	37	16.7	79	-0.2	46
⊖ S&P 500	-5.4		22.2		-0.4	
* BC AGGREGATE	6.4		3.6		1.0	
Median	-0.3		14.9		-0.2	

\*Interim Benchmark (current): 36% S&P 500, 7% S&P 400, 7% S&P 600, 27% Barclays Capital Aggregate, 19% MSCI ACWI ex-U.S., and 4% NCREIF Property Index + 100 bps (lagged one quarter)  
 Note: Interim Benchmark incorporates a proration of 2% real estate and 5% private equity  
 Returns are Gross of Fees



# Investment Outlook



# Third Quarter 2009 NEPC Observations and Opportunities

- Returns since March are impressive across many risky asset classes
  - Equity markets have continued a very strong run
    - S&P 500 up 15.6% in 3rd quarter
    - EAFE rose 19.5% and is up 29% year-to-date
    - Emerging markets returned over 20% for Q3, up nearly 100% from bottom
  - Credit markets continue to rebound and have posted very impressive results in 2009
  - Commodities have also shown positive returns
- Current economic environment poses both challenges and opportunities
  - High unemployment, low capacity utilization, and high debt levels will pose headwind for growth
  - Stimulative programs by central banks and governments may spark inflation in medium-term
- Government programs, the enormous debt overhang, and the collapse of private credit present attractive, less liquid opportunities in credit
  - Government Programs include TALF, PPIP, and Legacy Loans
  - Less liquid opportunities include DIP Financing, Distressed Debt, and Secondaries
- High inflation can strain budgets and reduce the purchasing power of traditional asset allocations
  - Extrapolating based on the secular themes of last 30 years (low inflation and strong economic growth) will likely lead to a poorly constructed portfolio
  - An allocation to inflation hedging assets can better protect a portfolio from unexpected spikes in inflation
- Continue to diversify globally and seek high value-add strategies
  - Uncertainty on the future direction of the economy only further underscores the need to diversify investments and balance risk exposures to protect a portfolio across various economic regimes
  - Understand where risks are being taken – size both alpha and beta exposures appropriately
- Given the tremendous returns across many risky asset classes since March, there are opportunities to rebalance back to neutral policy weights



# What Happened and What IMD Did

## What Happened

- Asset classes rallied on perceived signs of the recession ending
  - Fixed income spread markets continued to improve
  - Equities (US and International) extended their strong rebound from March lows
- Dollar pressure persisted
- Actual Q3 corporate earnings were better than estimates
- Unemployment continued to rise

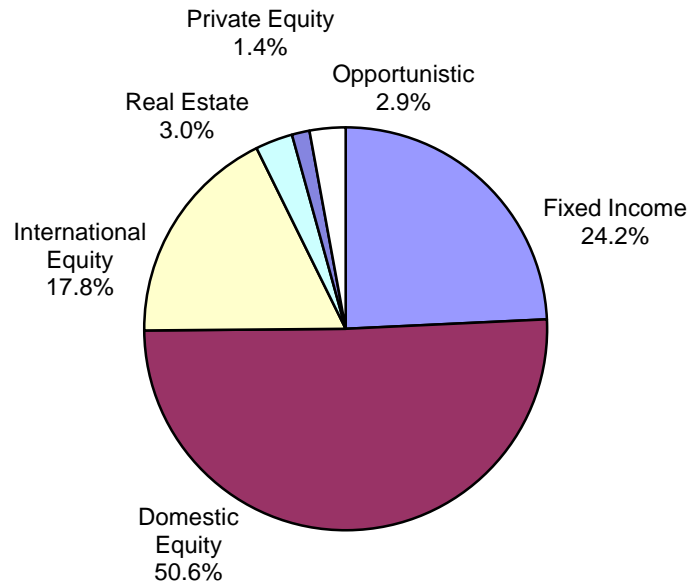
## IMD Activities

- No re-balancings occurred during Q3
- Cash for pension funding was raised from overvalued asset classes (MBS/Govies)
- Began restructuring fixed income consistent with ASRS policy allocation
- Hired 1 opportunistic investment manager; provided additional funding to existing opportunistic managers

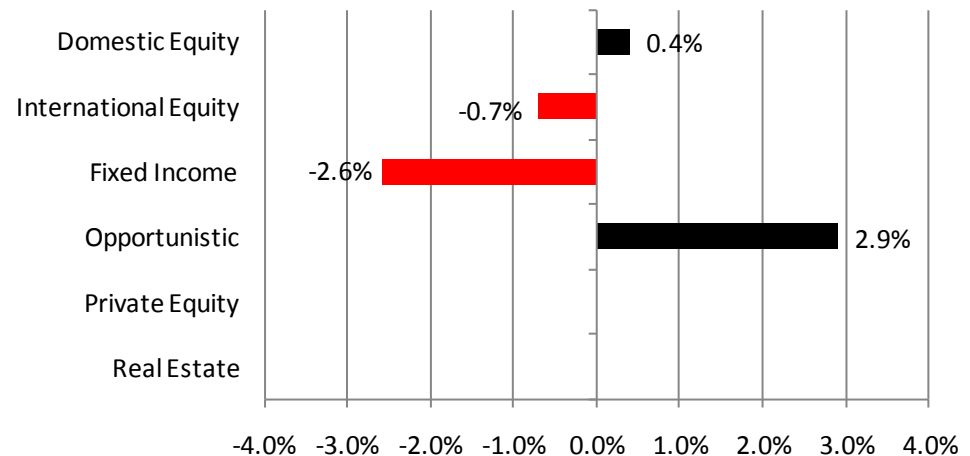


# Where are We Now? (As of 12/08/2009)

## Actual Asset Allocation



## Actual Asset Allocation vs. Policy Adjusted for Transition into Real Estate and Private Equity\*



• Real Estate and Private Equity actual weights are equal to policy weights during the implementation of these asset classes

\*\* Over/Under- weights include both GTAA positions as well as IMD tactical considerations



# IMD Investment House Views

- **Fixed Income**
  - Despite a strong rally in 2009, attractive valuations continue to exist in select spread product; primarily in high yield, structured credit and distressed loans.
  - Liquidity in the fixed income markets continues to improve due to aggressive Fed policy actions, a more positive tone in the equity markets, and signs that the recession has ended.
  - The IMD remains cautiously positive on fixed income; although the exceptionally strong rally in the credit markets has limited attractive investment opportunities.
- **US Equities**
  - Capital Markets have entered an interim trading range as investors sort through generally better economic data, accommodative monetary policy and mostly positive corporate earnings reports.
  - The pronounced advance year-to-date and fair valuations lend themselves to reasonable expectations for a consolidation phase, which the markets may now be experiencing.
  - In October, the IMD reduced exposure in U.S. Equities and reallocated to Non-U.S. Equities; bringing both asset classes close to neutral weight relative to policy benchmarks.
- **International Equities**
  - Higher tolerances for risk and relatively better than expected economic conditions in many overseas countries have attracted large flows of funds into international equities.
  - Even with the rebound, global equities in general appear reasonable on price-to-book values and price-to-earnings ratios at, or slightly below, long-term averages.
  - The IMD favors a strategic allocation within Non-U.S. Equities to emerging markets and less active exposure to developed markets.



# IMD Investment House Views

- **Private Equity**

- The Private Equity program continues to seek managers with a proven track record and top quartile returns in funds that target companies with lower middle, small, and micro enterprise values.
- Market NAVs have improved from December 2008 lows, but anticipate continued volatility with the industry-wide adoption of FASB 157.
- Opportunities exist for attractive risk adjusted returns in select distress, distress-for-control, turnaround, mezzanine and buyout strategies.

- **Real Estate**

- Lenders are extending and refinancing terms given the current softness in the commercial market, hopeful a broader recovery will allow borrowers to survive the current downturn.
- Future re-financings will likely be characterized by much tighter lending standards, lower loan-to-value and higher interest rates.
- The transaction market remains limited; dominated by a small number of distressed sales.

- **Opportunistic**

- The recent distressed credit cycle has been driven by weakening economic fundamentals, a debt supply overhang and increasing expected defaults in high yield and structured credit.
- However, opportunities continue to exist in select distressed credit markets with an implementation bias to fund managers who can evaluate and tactically move between various fixed income securities based on a relative value assessment.
- Distressed for control and rescue financing also provide attractive investment opportunities.



# Appendix



# ASRS Total Fund Benchmark History

## Policy History:

- 7/1/75 – 12/31/79 – 40% S&P 500/60% Barclays Capital Aggregate
- 1/1/80 – 12/31/83 – 50% S&P 500/50% Barclays Capital Aggregate
- 1/1/84 – 12/31/91 – 60% S&P 500/40% Barclays Capital Aggregate
- 1/1/92 – 12/31/94 – 50% S&P 500/40% Barclays Capital Aggregate/10% MSCI EAFE
- 1/1/95 – 6/30/97 – 45% S&P 500/40% Barclays Capital Aggregate/15% MSCI EAFE
- 7/1/97 – 12/31/99 – 50% S&P 500/35% Barclays Capital Aggregate/15% MSCI EAFE
- 1/1/00 – 9/30/03 – 53% S&P 500/30% Barclays Capital Aggregate/17% MSCI EAFE
- 10/1/03 – 12/31/06 – 53% S&P 500/26% Barclays Capital Aggregate/15% MSCI EAFE/ACWI ex-U.S.<sup>1</sup>/6% NCREIF Property Index + 100 bps (lagged one quarter)
- 1/1/07 – present – 31% S&P 500/7% S&P 400/7% S&P 600/26% Barclays Capital Aggregate/18% MSCI ACWI ex-U.S./6% NCREIF Property Index + 100 bps (lagged one quarter)/5% Russell 3000 + 300 bps

\*Interim Benchmark (current): 36% S&P 500, 7% S&P 400, 7% S&P 600, 27% Barclays Capital Aggregate, 19% MSCI ACWI ex-U.S., and 4% NCREIF Property Index + 100 bps (lagged one quarter)

Note: Interim Benchmark incorporates a proration of 2% real estate and 5% private equity

<sup>1</sup>MSCI EAFE/ACWI ex-U.S. Benchmark is the MSCI EAFE prior to 10/1/2005 and the MSCI ACWI ex-U.S. thereafter